

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/017,000	ISO-SIPILA, JUHA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Donald L. Storm	2654	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to AMEND'T IN CONJUNCTION WITH FILING A REQUEST FOR CONT'D EXAMINATION filed October 20 2005.

2. ☒ The allowed claim(s) is/are 1-20.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some\* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_

4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the Applicant, an amendment may be filed as provided by 37 CFR § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Mr. Kenneth Q. Lao, Attorney of Record, on November 29, 2005.

The application has been amended as follows:

#### IN THE CLAIMS:

In claim 9, line beginning *features in*, change "the" to --a--.

In claim 10, line 1, change "third" to --fourth--.

In claim 11, line 1, change "third" to --fourth--.

In claim 12, line beginning *speech*, after "features", add --in the cepstral domain--.

In claim 13, line 3, change "signal" (second occurrence) to --speech--.

In claim 14, line beginning *extracted*, before "comprising", insert --features--.

In claim 14, final line, delete "in the speech signal".

In claim 20, line beginning *the*, before "includes", insert --unit--.

In claim 20, line beginning *features*, before "filtered", insert --the--.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

An extension of time under 37 CFR § 1.136(a) is required in order extend the time period set for reply up to the date of submission of the request for continued examination. During a

telephone conversation conducted on November 7, 2005, Mr. Kenneth Q. Lao, Attorney for the Applicant, requested an extension of time for 1 (one) MONTH and authorized the Commissioner to charge Deposit Account No. 23-0442 the required fee of \$120 for this extension.

The Applicant's AMENDMENT IN CONJUNCTION WITH FILING A REQUEST FOR CONTINUED EXAMINATION, filed on October 20, 2005, has been entered.

***Allowable Subject Matter***

3. Claims 1-20 are allowed.

***Response to Arguments***

4. The prior Office action, mailed July 13, 2005, rejects claims under 35 USC § 102 and § 103. The Applicant's arguments and changes in AMENDMENT IN CONJUNCTION WITH FILING A REQUEST FOR CONTINUED EXAMINATION, filed on October 20, 2005, have been fully considered with the following results.

5. With respect to rejection of claims under 35 USC § 102 and § 103, citing Higgins alone and in combination, the changes entered by amendment include normalizing speech features (vectors) in a cepstral domain for providing speech features having a reduced speech to noise ratio and filtering the normalized speech features to reduce a noise component.

The reference Higgins does not explicitly describe that limitation. The whole structure and interaction expressed by the combination of all limitations is not made obvious compared to the prior art of record for the whole invention of the independent claims, particularly with the speech features from a speech signal including the noise component in a speech to noise ratio. The reference Higgins normalizes to provide a noise-suppressed signal. Accordingly, the rejections are removed. The Applicant's assertions with respect to the references have been considered, but they are moot in view of the new claim elements.

**Conclusion**

6. The following references here made of record are considered pertinent to applicant's disclosure:

Tom Claes and Dirk Van Compernelle, "SNR-Normalization for Robust Speech Recognition,"

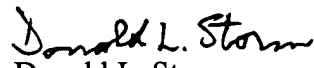
Proc. Int. Conf. Acoust., Speech, and Sig. Proc., vol. 1, pp. 331-334, 1996.

Moshier [US Patent 4,227,176] normalizes a power spectrum to remove frequency-band trending and increase local variations across the spectrum.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is (571) 272-7614. The examiner can normally be reached on weekdays between 7:00 AM and 3:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

November 30, 2005

  
Donald L. Storm  
Examiner, Art Unit 2654